

# SEQUENCE LISTING

<110> Walke, D. Wade  
Scoville, John  
Friddle, Carl Johan

<120> Novel Human Kinases and Polynucleotides Encoding the Same

<130> LEX-0348-USA

<150> US 60/293,248

<151> 2001-05-24

<160> 5

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1938

<212> DNA

<213> homo sapiens

<400> 1

```
atgctgaaat tccaagaggc agctaagtgt gtgagtggat caacagccat ttccacttat 60
ccaaagacct tgattgcaag aagatacgtg cttcaacaaa aacttggcag tgggaagtttt 120
ggaactgtct atctggtttc agacaagaaa gccaaacgag gagaggaatt aaaggtaactt 180
aaggaaatat ctggttgaga actaaatcca aatgaaactg tacaggccaa ttttgaagcc 240
caactcctct ccaagctgga ccaccagcc attgtcaagt tccatgcaag ttttgtggag 300
caagataatt tctgcattat cacggagtac tgtgagggcc gagatctgga cgataaaaatt 360
caggaatata aacaagctgg aaaaatcttt ccagaaaatc aaataataga atggttttatc 420
cagctgctgc tgggagttga ctacatgcat gagaggagga tacttcatcg agacttaaag 480
tcaaagaatg tatttctgaa aaataatctc cttaaaattg gagatttttg agtttctcga 540
cttctaattg gatcctgtga cctggccaca actttaactg gaactcccca ttatatgagt 600
cctgaggctc tgaaacacca aggctatgac acaaagtcgg acatctggtc actggcatgc 660
atthttgtat agatgtgctg catgaatcat gcattcgtg gctccaattt cttatccatt 720
gttttaaaaa ttggtgaagg tgacacacct tctctccctg agagatatcc aaaagaacta 780
aatgccatca tggaaagcat gttgaacaag aatccttcat taagaccatc tgctatcgaa 840
atthtaaaaa tcccttacct tgatgagcag ctacagaacc taatgtgtag atattcagaa 900
atgactctgg aagacaaaaa tttggattgt cagaaggagg ctgctcatat aattaatgcc 960
atgcaaaaaa ggatccacct gcagactctg agggcactgt cagaagtaca gaaaatgacg 1020
ccaagagaaa ggatgcggct gaggaagctc caggcggctg atgagaaagc caggaagctg 1080
aaaaagattg tggaaagaaa atatgaagaa aatagcaaac gaatgcaaga attgagatct 1140
cggaactttc agcagctgag tgttgatgta ctccatgaaa aaacacattt aaaaggaatg 1200
gaagaaaagg aggagcaacc tgagggaaga ctttcttggt caccccagga cgaggatgaa 1260
gagaggtggc aaggcaggga agaggaatct gatgaaccaa ctttagagaa cctgcctgag 1320
tctcagccta ttccttccat ggacctccac gaacttgaat caattgtaga ggatgccaca 1380
tctgaccttg gataccatga gatcccagaa gaccacttg tggctgaaga gtactacgct 1440
gatgcatttg attcctattg tgtagagagt gatgaggagg aagaagaaat agcgttagaa 1500
agaccagaga aagaaatcag gaatgaggga tcccagcctg cttacagaac aaaccaacag 1560
gacagtgata tcgaagcggt ggccagggtg tgggaaaatg tcttgggttg cacttctcta 1620
gacacaaaga ccatcaccac catggctgaa gacatgtccc caggaccacc aattttcaac 1680
agtgtgatgg ccaggaccaa gatgaaacgc atgagggaat cagccatgca gaagctgggg 1740
acagaagtat ttgaagaggt ctataattac ctcaagagag caaggcatca gaatgctagc 1800
gaagcagaga tccgcgagtg tttggaaaaa gtggtgcctc aagccagcga ctgttttgaa 1860
gtggaccagc tcctgtactt tgaagagcag ttgctgatca cgatgggaaa agaacctact 1920
```

ctccagaacc atctctag

1938

<210> 2

<211> 645

<212> PRT

<213> homo sapiens

<400> 2

Met	Leu	Lys	Phe	Gln	Glu	Ala	Ala	Lys	Cys	Val	Ser	Gly	Ser	Thr	Ala	1	5	10	15
Ile	Ser	Thr	Tyr	Pro	Lys	Thr	Leu	Ile	Ala	Arg	Arg	Tyr	Val	Leu	Gln	20	25	30	
Gln	Lys	Leu	Gly	Ser	Gly	Ser	Phe	Gly	Thr	Val	Tyr	Leu	Val	Ser	Asp	35	40	45	
Lys	Lys	Ala	Lys	Arg	Gly	Glu	Glu	Leu	Lys	Val	Leu	Lys	Glu	Ile	Ser	50	55	60	
Val	Gly	Glu	Leu	Asn	Pro	Asn	Glu	Thr	Val	Gln	Ala	Asn	Leu	Glu	Ala	65	70	75	80
Gln	Leu	Leu	Ser	Lys	Leu	Asp	His	Pro	Ala	Ile	Val	Lys	Phe	His	Ala	85	90	95	
Ser	Phe	Val	Glu	Gln	Asp	Asn	Phe	Cys	Ile	Ile	Thr	Glu	Tyr	Cys	Glu	100	105	110	
Gly	Arg	Asp	Leu	Asp	Asp	Lys	Ile	Gln	Glu	Tyr	Lys	Gln	Ala	Gly	Lys	115	120	125	
Ile	Phe	Pro	Glu	Asn	Gln	Ile	Ile	Glu	Trp	Phe	Ile	Gln	Leu	Leu	Leu	130	135	140	
Gly	Val	Asp	Tyr	Met	His	Glu	Arg	Arg	Ile	Leu	His	Arg	Asp	Leu	Lys	145	150	155	160
Ser	Lys	Asn	Val	Phe	Leu	Lys	Asn	Asn	Leu	Leu	Lys	Ile	Gly	Asp	Phe	165	170	175	
Gly	Val	Ser	Arg	Leu	Leu	Met	Gly	Ser	Cys	Asp	Leu	Ala	Thr	Thr	Leu	180	185	190	
Thr	Gly	Thr	Pro	His	Tyr	Met	Ser	Pro	Glu	Ala	Leu	Lys	His	Gln	Gly	195	200	205	
Tyr	Asp	Thr	Lys	Ser	Asp	Ile	Trp	Ser	Leu	Ala	Cys	Ile	Leu	Tyr	Glu	210	215	220	
Met	Cys	Cys	Met	Asn	His	Ala	Phe	Ala	Gly	Ser	Asn	Phe	Leu	Ser	Ile	225	230	235	240
Val	Leu	Lys	Ile	Val	Glu	Gly	Asp	Thr	Pro	Ser	Leu	Pro	Glu	Arg	Tyr	245	250	255	
Pro	Lys	Glu	Leu	Asn	Ala	Ile	Met	Glu	Ser	Met	Leu	Asn	Lys	Asn	Pro	260	265	270	
Ser	Leu	Arg	Pro	Ser	Ala	Ile	Glu	Ile	Leu	Lys	Ile	Pro	Tyr	Leu	Asp	275	280	285	
Glu	Gln	Leu	Gln	Asn	Leu	Met	Cys	Arg	Tyr	Ser	Glu	Met	Thr	Leu	Glu	290	295	300	
Asp	Lys	Asn	Leu	Asp	Cys	Gln	Lys	Glu	Ala	Ala	His	Ile	Ile	Asn	Ala	305	310	315	320
Met	Gln	Lys	Arg	Ile	His	Leu	Gln	Thr	Leu	Arg	Ala	Leu	Ser	Glu	Val	325	330	335	
Gln	Lys	Met	Thr	Pro	Arg	Glu	Arg	Met	Arg	Leu	Arg	Lys	Leu	Gln	Ala	340	345	350	
Ala	Asp	Glu	Lys	Ala	Arg	Lys	Leu	Lys	Lys	Ile	Val	Glu	Glu	Lys	Tyr	355	360	365	
Glu	Glu	Asn	Ser	Lys	Arg	Met	Gln	Glu	Leu	Arg	Ser	Arg	Asn	Phe	Gln	370	375	380	

Gln Leu Ser Val Asp Val Leu His Glu Lys Thr His Leu Lys Gly Met  
 385 390 395 400  
 Glu Glu Lys Glu Glu Gln Pro Glu Gly Arg Leu Ser Cys Ser Pro Gln  
 405 410 415  
 Asp Glu Asp Glu Glu Arg Trp Gln Gly Arg Glu Glu Glu Ser Asp Glu  
 420 425 430  
 Pro Thr Leu Glu Asn Leu Pro Glu Ser Gln Pro Ile Pro Ser Met Asp  
 435 440 445  
 Leu His Glu Leu Glu Ser Ile Val Glu Asp Ala Thr Ser Asp Leu Gly  
 450 455 460  
 Tyr His Glu Ile Pro Glu Asp Pro Leu Val Ala Glu Glu Tyr Tyr Ala  
 465 470 475 480  
 Asp Ala Phe Asp Ser Tyr Cys Val Glu Ser Asp Glu Glu Glu Glu Glu  
 485 490 495  
 Ile Ala Leu Glu Arg Pro Glu Lys Glu Ile Arg Asn Glu Gly Ser Gln  
 500 505 510  
 Pro Ala Tyr Arg Thr Asn Gln Gln Asp Ser Asp Ile Glu Ala Leu Ala  
 515 520 525  
 Arg Cys Leu Glu Asn Val Leu Gly Cys Thr Ser Leu Asp Thr Lys Thr  
 530 535 540  
 Ile Thr Thr Met Ala Glu Asp Met Ser Pro Gly Pro Pro Ile Phe Asn  
 545 550 555 560  
 Ser Val Met Ala Arg Thr Lys Met Lys Arg Met Arg Glu Ser Ala Met  
 565 570 575  
 Gln Lys Leu Gly Thr Glu Val Phe Glu Glu Val Tyr Asn Tyr Leu Lys  
 580 585 590  
 Arg Ala Arg His Gln Asn Ala Ser Glu Ala Glu Ile Arg Glu Cys Leu  
 595 600 605  
 Glu Lys Val Val Pro Gln Ala Ser Asp Cys Phe Glu Val Asp Gln Leu  
 610 615 620  
 Leu Tyr Phe Glu Glu Gln Leu Leu Ile Thr Met Gly Lys Glu Pro Thr  
 625 630 635 640  
 Leu Gln Asn His Leu  
 645

<210> 3  
 <211> 1449  
 <212> DNA  
 <213> homo sapiens

<400> 3  
 atgctgaaat tccaagaggc agctaagtgt gtgagtggat caacagccat ttccacttat 60  
 ccaaagacct tgattgcaag aagatacgtg cttcaacaaa aacttggcag tggaagtgtt 120  
 ggaactgtct atctggtttc agacaagaaa gccaaacgag gagaggaatt aaagggtactt 180  
 aaggaaatat ctgttggaga actaaatcca aatgaaactg tacaggccaa tttggaagcc 240  
 caactcctct ccaagctgga ccaccagcc attgtcaagt tccatgcaag ttttgtggag 300  
 caagataatt tctgcattat cacggagtac tgtgagggcc gagatctgga cgataaaatt 360  
 caggaatata aacaagctgg aaaaatcttt ccagaaaatc aaataataga atggtttatc 420  
 cagctgctgc tgggagttga ctacatgcat gagaggagga tacttcatcg agacttaaag 480  
 tcaaagaatg tatttctgaa aaataatctc cttaaaattg gagatttttg agtttctcga 540  
 cttctaattg gatectgtga cctggccaca actttaactg gaactcccca ttatatgagt 600  
 cctgaggctc tgaaacacca aggctatgac acaaagtcgg acatctggtc actggcatgc 660  
 attttgtatg agatgtgctg catgaatcat gcattcgtcg gtcctcaattt cttatccatt 720  
 gttttaaaaa ttgttgaagg tgacacacct tctctcctcg agagatatcc aaaagaacta 780  
 aatgccatca tggaaagcat gttgaacaag aatccttcat taagaccatc tgctatcgaa 840

```

atttttaaaaa tcccttacct tgatgagcag ctacagaacc taatgtgtag atattcagaa 900
atgactctgg aagacaaaaa tttggattgt cagaaggagg ctgctcatat aattaatgcc 960
atgcaaaaaa ggatccacct gcagactctg agggcactgt cagaagtaca gaaaatgacg 1020
ccaagagaaa ggatgaggct gaggaagctc caggcggctg atgagaaaagc caggaagctg 1080
aaaaagattg tggagaaaaa atatgaagaa aatagcaaac gaatgcaaga attgagatct 1140
cggaactttc agcagctgag tgttgatgta ctccatgaaa aaacacattt aaaaggaatg 1200
gaagaaaagg aggagcaacc tgagggaaga ctttctgttt caccacagga cgaggatgaa 1260
gagaggtggc aaggcagggg agaggaatct gatgaaccaa ctttagagaa cctgcctgag 1320
tctcagccta ttccttccat ggacctccac gaacttgaat caattgtaga ggatgccaca 1380
tctgaccttg gataccatgg agactgtaat ctaatttcac tagacgaata ctggaaaaat 1440
gaaaaataa 1449

```

```

<210> 4
<211> 482
<212> PRT
<213> homo sapiens

```

```

<400> 4
Met Leu Lys Phe Gln Glu Ala Ala Lys Cys Val Ser Gly Ser Thr Ala
1 5 10 15
Ile Ser Thr Tyr Pro Lys Thr Leu Ile Ala Arg Arg Tyr Val Leu Gln
20 25 30
Gln Lys Leu Gly Ser Gly Ser Phe Gly Thr Val Tyr Leu Val Ser Asp
35 40 45
Lys Lys Ala Lys Arg Gly Glu Glu Leu Lys Val Leu Lys Glu Ile Ser
50 55 60
Val Gly Glu Leu Asn Pro Asn Glu Thr Val Gln Ala Asn Leu Glu Ala
65 70 75 80
Gln Leu Leu Ser Lys Leu Asp His Pro Ala Ile Val Lys Phe His Ala
85 90 95
Ser Phe Val Glu Gln Asp Asn Phe Cys Ile Ile Thr Glu Tyr Cys Glu
100 105 110
Gly Arg Asp Leu Asp Asp Lys Ile Gln Glu Tyr Lys Gln Ala Gly Lys
115 120 125
Ile Phe Pro Glu Asn Gln Ile Ile Glu Trp Phe Ile Gln Leu Leu Leu
130 135 140
Gly Val Asp Tyr Met His Glu Arg Arg Ile Leu His Arg Asp Leu Lys
145 150 155 160
Ser Lys Asn Val Phe Leu Lys Asn Asn Leu Leu Lys Ile Gly Asp Phe
165 170 175
Gly Val Ser Arg Leu Leu Met Gly Ser Cys Asp Leu Ala Thr Thr Leu
180 185 190
Thr Gly Thr Pro His Tyr Met Ser Pro Glu Ala Leu Lys His Gln Gly
195 200 205
Tyr Asp Thr Lys Ser Asp Ile Trp Ser Leu Ala Cys Ile Leu Tyr Glu
210 215 220
Met Cys Cys Met Asn His Ala Phe Ala Gly Ser Asn Phe Leu Ser Ile
225 230 235 240
Val Leu Lys Ile Val Glu Gly Asp Thr Pro Ser Leu Pro Glu Arg Tyr
245 250 255
Pro Lys Glu Leu Asn Ala Ile Met Glu Ser Met Leu Asn Lys Asn Pro
260 265 270
Ser Leu Arg Pro Ser Ala Ile Glu Ile Leu Lys Ile Pro Tyr Leu Asp
275 280 285
Glu Gln Leu Gln Asn Leu Met Cys Arg Tyr Ser Glu Met Thr Leu Glu
290 295 300

```

Asp	Lys	Asn	Leu	Asp	Cys	Gln	Lys	Glu	Ala	Ala	His	Ile	Ile	Asn	Ala	
305					310					315					320	
Met	Gln	Lys	Arg	Ile	His	Leu	Gln	Thr	Leu	Arg	Ala	Leu	Ser	Glu	Val	
				325					330					335		
Gln	Lys	Met	Thr	Pro	Arg	Glu	Arg	Met	Arg	Leu	Arg	Lys	Leu	Gln	Ala	
			340					345					350			
Ala	Asp	Glu	Lys	Ala	Arg	Lys	Leu	Lys	Lys	Ile	Val	Glu	Glu	Lys	Tyr	
	355						360					365				
Glu	Glu	Asn	Ser	Lys	Arg	Met	Gln	Glu	Leu	Arg	Ser	Arg	Asn	Phe	Gln	
370						375					380					
Gln	Leu	Ser	Val	Asp	Val	Leu	His	Glu	Lys	Thr	His	Leu	Lys	Gly	Met	
385					390					395					400	
Glu	Glu	Lys	Glu	Glu	Gln	Pro	Glu	Gly	Arg	Leu	Ser	Cys	Ser	Pro	Gln	
				405				410						415		
Asp	Glu	Asp	Glu	Glu	Arg	Trp	Gln	Gly	Arg	Glu	Glu	Glu	Ser	Asp	Glu	
			420					425					430			
Pro	Thr	Leu	Glu	Asn	Leu	Pro	Glu	Ser	Gln	Pro	Ile	Pro	Ser	Met	Asp	
	435					440					445					
Leu	His	Glu	Leu	Glu	Ser	Ile	Val	Glu	Asp	Ala	Thr	Ser	Asp	Leu	Gly	
	450					455					460					
Tyr	His	Gly	Asp	Cys	Asn	Leu	Ile	Ser	Leu	Asp	Glu	Tyr	Trp	Lys	Asn	
465					470					475					480	
Glu	Lys															

<210> 5  
 <211> 2847  
 <212> DNA  
 <213> homo sapiens

<400> 5

ccgcgcgcgtc	tccctggcca	cggttccaaa	cagccgtggc	ccgcggtgtc	tggcgctcgg	60
tgggtgtggt	tgcccctagt	ttgaggcctg	cccgattacc	cgcaagactt	gggcagcccc	120
gggcgcgcgt	ccgaccacga	cagggaaagg	aaccttaatc	tcattcttta	aataaggaga	180
attactgagt	gacctgaagg	acccttttca	gctggaaagt	ctgaactgac	caacactgga	240
tgaatttgac	catttcttag	gagactggaa	tgtaaagttt	ctataaatga	atgaaccagt	300
tctctcttgt	ttggagcaat	gctgaaattc	caagaggcag	ctaagtgtgt	gagtggatca	360
acagccattt	ccacttatcc	aaagaccttg	attgcaagaa	gatactgtgt	tcaacaaaaa	420
cttggcagtg	gaagttttgg	aactgtctat	ctggtttcag	acaagaaagc	caaacgagga	480
gaggaattaa	aggtacttaa	ggaaatatct	gttgagaaac	taaataccaa	tgaaactgta	540
caggccaatt	tggaagccca	actcctctcc	aagctggacc	accagccat	tgtcaagttc	600
catgcaagtt	ttgtggagca	agataatttc	tgcattatca	cggagtactg	tgagggccga	660
gatctggacg	ataaaaattca	ggaatataaa	caagctggaa	aaatctttcc	agaaaatcaa	720
ataatagaat	ggtttatcca	gctgctgctg	ggagttgact	acatgcatga	gaggaggata	780
cttcatcgag	acttaaagtc	aaagaatgta	tttctgaaaa	ataatctcct	taaaattgga	840
gattttggag	tttctcgact	tctaattggga	tcctgtgacc	tggccacaac	tttaactgga	900
actccccatt	atatgagtcc	tgaggctctg	aaacaccaag	gctatgacac	aaagtcggac	960
atctggtcac	tggcattgat	tttgatgatg	atgtgctgca	tgaatcatgc	attcgcgtggc	1020
tccaatttct	tatccattgt	tttaaaaatt	gttgaagggt	acacaccttc	tctccctgag	1080
agatatccaa	aagaactaaa	tgccatcatg	gaaagcatgt	tgaacaagaa	tccttcatta	1140
agaccatctg	ctatcgaaat	tttaaaaatc	ccttaccttg	atgagcagct	acagaacctc	1200
atgtgtagat	attcagaaat	gactctggaa	gacaaaaatt	tggattgtca	gaaggaggct	1260
gctcatataa	ttaatgccat	gcaaaaaagg	atccacctgc	agactctgag	ggcactgtcat	1320
gaagtacaga	aaatgacgcc	aagagaaaag	atgcggctga	ggaagctcca	ggcggctgat	1380
gagaaagcca	ggaagctgaa	aaagattgtg	gaagaaaaat	atgaagaaaa	tagcaaacga	1440

atgcaagaat	tgagatctcg	gaactttcag	cagctgagtg	ttgatgtact	ccatgaaaaa	1500
acacatttaa	aaggaatgga	agaaaaggag	gagcaacctg	aggggaagact	ttcttgttca	1560
ccccaggacg	aggatgaaga	gaggtggcaa	ggcagggaag	aggaatctga	tgaaccaact	1620
ttagagaacc	tgctgagtc	tcagcctatt	ccttccatgg	acctccacga	acttgaatca	1680
attgtagagg	atgccacatc	tgaccttgga	taccatgaga	tcccagaaga	cccacttggtg	1740
gctgaagagt	actacgctga	tgcatttgat	tcctattgtg	tagagagtga	tgaggaggaa	1800
gaagaaatag	cgttagaaaag	accagagaaa	gaaatcagga	atgagggatc	ccagcctgct	1860
tacagaacaa	accaacagga	cagtgatatc	gaagcgttgg	ccaggtgttt	ggaaaatgtc	1920
ctgggttgca	cttctctaga	cacaaagacc	atcaccacca	tggtctgaaga	catgtcccca	1980
ggaccaccaä	ttttcaacag	tgtgatggcc	aggaccaaga	tgaaacgcat	gagggaatca	2040
gccatgcaga	agctggggac	agaagtattt	gaagaggtct	ataattacct	caagagagca	2100
aggcatcaga	atgctagcga	agcagagatc	cgcgagtggt	tggaaaaagt	ggtgcctcaa	2160
gccagcgact	gttttgaagt	ggaccagctc	ctgtactttg	aagagcagtt	gctgatcacg	2220
atgggaaaag	aacctactct	ccagaaccat	ctctaggcaa	ctatcaaaaa	gaagcagaag	2280
ttcaagtgga	caaatttatg	tgaaaattca	tttaacatat	aagctgaact	ctattatggg	2340
gaatggatac	aaaagcagag	ctcccatctt	gactttcaat	tcctcatcag	aagtactggc	2400
ttcttttagag	agtagtaagc	atggctgcct	atgcttggag	tcataagtgt	tatttggact	2460
ataccctgag	ataagcttat	agatcaagtt	tggctccctt	gaaaagcatt	tctctcatgt	2520
gcgccctcag	ggcttccagc	aggattgagt	caccctgacg	atgaccggga	gaagccgtgt	2580
gctcttcatt	attttcagct	ggaggacaga	gctcagtgcc	tgactgccta	gggtctcatg	2640
gactgtaggc	agcctgccag	tgaaggtcac	tggactctag	cctacaacat	gctgagctac	2700
agcccagaag	ccagacatgc	ctgtcttagc	tgacctgttt	ttgggtccact	tttgccttcc	2760
catgactaat	aaggaagata	tgtgtgtatt	tcatacacac	acaaggacct	ggattaaaaa	2820
tccaaaaagt	gaaaaaaaaa	aaaaaaa				2847